

**Embassy of the United States of America
Addis Ababa, Ethiopia**



**Statement of Work
For
Groundwater Exploration in the Compound**

June 2023

1. INTRODUCTION

The United States Embassy in Addis Ababa, located at Algeria street near Shero Meda, Ethiopia has a requirement for a new groundwater well in the Embassy Compound. The objective is to have a fully functioning water well that will supply for the Compound landscape, water truck supplemental delivery to diplomatic residences and supply to existing raw water tank.

Technical requirements, and geotechnical survey for this project shall be in line with existing water well yield/ capacity to be tested which was constructed before FY2010 and currently not in use.

The Client requires detailed information on prospects of drilling production boreholes and location of the new well. The objective of the present exploration is to assess the availability of groundwater, to recommend borehole drilling sites and comment on aspects of depth to potential aquifers, aquifer availability and type, possible yields and water quality. For this purpose, a geological and hydrogeological survey of the areas must be done and analyzed by a professional team.

The well must be protected from the pollution of non-sanitary surroundings and should be located at the minimum distances from the structures or topographic features identified in Table below:

Table 1. Minimum Well Location Distances

Structure or Topographic Feature	Minimum distance (M)
Building Foundation – Non-Treated	3
Building Foundation with Termite Treatment	15
Residential Sewer Line	15
Wastewater Treatment Plant or Sewage Lift Station	30
Individual Septic Tanks	15
Septic Tank Drain fields	30
Underground Fuel Storage Tanks	30
Cemetery	30
Non-Potable Water Well	30
Property Line	15
Storm Water Detention Basin or Infiltration Beds	15

The contractor's geotechnical team shall review all available information and obtain all required additional geotechnical information necessary for the design and construction of the new well.

2. CHARACTER OF WORK

- 2.1 The consulting services required under this Statement of Work (SOW) shall be the conduct of a Hydrological and Geophysical exploration Survey inside the Embassy Compound to determine the exact location of the deep well and water level/condition. Consultant shall provide the tools, equipment, material, labor, and supervision necessary to complete the work described in this Statement of Work (SOW) and in a full compliance of current geotechnical study of the city and local municipality water authority guidelines.
- 2.2 Consultant is responsible that the work is done within the technical requirements in this SOW. All materials and the equipment used on this project shall be functional and in good condition. Contractor shall submit the technical documentation and the specifications of all proposed equipment to the Contracting Officer's Representative (COR) for approval. No equipment shall be installed before the written approval of the COR.
- 2.3 Consultant will submit the shop drawings showing the schematics of the equipment connection prior to the start of the work to the COR for approval.
- 2.4 Consultant shall follow security and safety directives as explained by the Embassy. Failure to comply with these directives may result in the permanent removal of the workers that violate these rules from the work site.
- 2.5 Consultant shall identify a Project Manager who shall be responsible for the overall management of this Contract. The Project Manager will be approved by the Embassy.
- 2.6 Consultant is responsible for safety and shall comply with all local labor laws, regulations, customs, and practices pertaining to labor, safety, and similar matters.
- 2.7 Prevention Plan. Consultant shall promptly report all accidents resulting in lost time, disabling, or fatal injuries to the COR.
- 2.8 All used equipment, debris, trash, and hazardous materials will be removed from the site and disposed by the contractor. Access for trucks/dumpsters shall be coordinated with the COR and the Facility Manager (FM). Contractor is responsible for ensuring that disposal of equipment, debris, and hazardous material complies with the laws and local regulations of Addis Ababa, Ethiopia.

3 STATEMENT OF WORK

The specific objectives of the geological survey are:

- 3.1 Determination of potential water source within the proposed project site.
- 3.2 Determination of general area's aquifer characteristic.

- 3.3 Determination of the composition and thickness of the different geological unit below ground surface.
- 3.4 Determination of the thickness and depth of potential aquifer layer/s and selection of favorable site/s for drilling of well/s with adequate volume to support the water requirement in the Compound.
- 3.5 Prepare a statement of work, SOW in collaboration with the COR for the final well drilling contracts by a professional well contractor and supervise the contractor's performance.

4 PREPARATION WORK:

- 4.1 Transport and mobilization of all required tools, accessories, and materials, shall be approved by the COR before the start of project. The type of test drilling equipment most suitable for the work needs to be determined.
- 4.2 An onsite inspection of the drilling location should be made by the geologist, designers, and other essential members of the exploration team. The purpose of the onsite inspection is to determine the exploration needed to provide the data required for design. Data are required for several design disciplines with different needs. Having knowledgeable representatives see the site is important when formulating an exploration program. Changes and additions to exploration programs during or after exploration are expected but can be minimized with careful planning.
- 4.3 During the site inspection, the geologist and designers should discuss in detail all the design concerns that can only be solved by analyzing the subsurface geology. The team should be explicit as to the size, quantity, type, and quality of soil or rock samples that are necessary to develop an accurate evaluation of geologic conditions. The geologist can recommend the type of equipment and drilling procedures needed, based on the drilling and sampling requirements, and to address design concerns as well as to provide samples needed for laboratory testing. The onsite inspection should provide other pertinent information which is critical to the selection of specific equipment. The following factors should be addressed when preparing the exploration plan.

5 PERMITS

- 5.1 The contractor is responsible for maintaining the contact with Addis Ababa

City and local Municipality authorities for guidelines and obtaining all necessary permits from them. Any required paperwork will be prepared by the contractor and submitted to the appropriate U.S. Government official for signature when required.

6 FINAL INSPECTION AND ACCEPTANCE

6.1 The Contractor will notify the COR of the completion of the work. The COR will inspect the work and issue a punch list to the Contractor.

6.2 The COR will issue a final acceptance note to the contractor after all the punch list items have been completed.

7 CRITERIA

7.1 The Contractor shall perform work in accordance with U.S. codes and standards. OBO will review and comment on the Contractor's submissions using the following codes and standards:

7.1.1 International Building Code

7.1.2 Safety and Health Requirements Manual:
<http://www.usace.army.mil/Safety-and-Occupational-Health/Safety-and-Health-Requirements-Manual/>

7.1.3 Sampling and Testing:

7.1.3.1 All requirements for soil sampling (split-barrel and undisturbed), standard penetration test, rock core drilling, and cone penetration tests shall be expressed by reference to the ASTM Standards listed below:

7.1.3.1.1 ASTM D-1586, Penetration and Split Barrel Sampling

7.1.3.1.2 STM D-1587, Thin Walled Tube Sampling

7.1.3.1.3 ASTM D-2113, Diamond Core Drilling for Site Investigation

END OF SOW